

ABSTRACT

Apparatuses and methods for automating the assembly of a fiber optic module. The fiber optic module typically includes a housing, a clip, and a ferrule that is attached to the end of a fiber optic cable. The housing, clip, ferrule and fiber optic cable are supported by a pallet assembly. The pallet assembly can be loaded into a docking station of a laser weld machine that welds the ferrule to the clip. The pallet assembly includes a cartridge that is attached to a pallet and supports the housing. The pallet is constructed to receive different cartridges. Each cartridge has support features that correspond to a specific type of module housing. A different type of module housing may be loaded onto the pallet assembly by merely replacing the cartridge. The same pallet can therefore be used for the assembly of different fiber modules. This minimizes the tooling cost and change-over time associated with manufacturing different types of modules. The ferrule can be loaded into the housing with a self-aligning gripper assembly. The self-aligning process is automated to reduce the time and cost associated with

manufacturing a module. The docking station of the laser weld machine may have features that more fully automate the docking and welding processes.